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ABSTRACT

An effort was made in this study to determine whether the absence or presence of news film in a television news segment influences a believability or preference judgment made by a respondent when comparing a television report directly with a newspaper report of the same event. One hundred eight students at Temple University viewed one of two videotapes contained eight news reports--four included film and four did not for each tape--and read one newspaper account of each of the eight events. Results showed that television reports with film were consistently more preferred than newspaper reports, but newspaper reports were not consistently more preferred than television reports without film. Results concerning media credibility showed that television reports with film were generally more believed than newspaper reports, and that newspaper reports were generally more believed than television reports without film. Results tended to show that the effect of the use of news film--particularly for believability--depends to some extent on story content The finding is consistent with results obtained in prior studies of media believability. (Author/RB)

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THE RELATIONSHIP OF PERCEIVED MEDIA CREDIBILITY, MEDIA PREFERENCE, AND TELEVISION NEWS FILM

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THE RELATIONSHIP OF PERCEIVED MEDIA CREDIBILITY, MEDIA PREFERENCE, AND TELEVISION NEWS FILM

The importance of television news film in media credibility and media preference judgments has been much discussed in recent years, but little research has been conducted to determine the nature and extent of its role.

Carter and Greenberg, Chang and Lemert, and Ryan all reported finding some evidence that television is more believed by some individuals because of its visual dimension.[1] None, however, explored the relationship of news film and perceived credibility in depth.

McDaniel examined the impact of news film on perceived credibility (and on interest, intimacy, and information gain) under four different treatments:

> One used a live studio newscaster only; another used silent film with live newscaster voice-over--the news copy and the film containing essentially the same information; a third version was produced using silent film with live newscaster reading non-redundant voice-over copy; and the final version relied on sound-on-film with live newscaster lead in.[2]

The addition of news film, McDaniel reported, did not significantly improve the credibility perceptions of the 320 speech students he studied for a story about the construction of a new children's home for wards of the state. Perceived credibility was significantly higher in the sound-on-film version for a story about a junior high school marching band, but not in the non-redundant voice-over and redundant voice-over treatments.

McDaniel concluded, therefore, that the impact of film usage

on perceived credibility was not the same for the two stories, that perceived credibility may depend in part on story content.

The impact of news film on perceived credibility and perceived preference was explored in the study reported here. Specifically, the following research questions were investigated:

> 1) Does the absence or presence of news film in a television news segment influence a credibility judgment made by a respondent when he compares a television report directly with a newspaper report of the same event?
>
> 2) Does the absence or presence of news film in a television news segment influence a preference judgment made by a respondent when he compares a television report directly with a newspaper account of the same event?

Methodology

Respondents viewed one of two videotapes containing eight news reports—four included film and four did not for each tape—and read one newspaper account of each event reported by television. Subjects indicated for each story whether they believed the television report or the newspaper report more and then indicated whether they preferred the television report or the newspaper report more.

When a tape A story did not contain a film report, the corresponding tape B story did; when a tape A story did include film, the corresponding tape B story did not; and so on through the eight news stories.

Development of the test instrument began with the creation of a pool of news stories. Regular, weekday evening newscasts presented by a major Philadelphia television station were videotaped and issues of three Philadelphia newspapers—The Evening Bulletin, the Philadelphia Daily News, and The Philadelphia Inquirer—were collected from April 30 to May 18, 1973.[3]

To be included in the story pool, each news story had to be: 1) proximate, in that the event had to occur in the so-called Tri-State Area (southern

New Jersey, southeast Pennsylvania, and northern Delaware); 2) timely, in that it had to refer to a future event or one which occurred the day of the report; 3) reported by the television station and at least one of the three dailies; 4) at least a minute long when reported by television; and 5) a film report when reported by television.

Twenty-two news reports which the author felt met the stated criteria were edited onto one videotape and shown twice to three persons. They indicated whether the timeliness and proximity news values did in fact appear in each news segment. The eight news reports used in the study were selected from the 16 which they unanimously agreed contained the two news values.

When the story pool was reduced to the final eight items, newspaper reports were clipped and by-lines were removed so that the source of the newspaper report could be determined only by an expert in typography. When an event was reported by more than one newspaper, the article used in the study was randomly selected from those available.

A 19-page test instrument included instructions to subjects, copies of the eight newspaper accounts, and space for subjects to respond to two questions: 1) "Of the two reports of the preceding news story, which report did you <u>believe</u> most: the one on television or the one in the newspaper?" and 2) "Of the two reports of the preceding news story, which report did you <u>prefer</u> the most: the one on television or the one in the newspaper?" Each question was followed by the names of the two media, and subjects circled one. The order of presentation of the media names was reversed within the questions and at the ends of the questions in half of the questionnaires.

Videotapes were then prepared. To avoid biasing the study by using a

well-known anchorperson, the original anchorman for each of the eight broadcast news stories was replaced by a Temple University professor who had worked in Philadelphia as a broadcast newsman, but who had not appeared on Philadelphia television for approximately three and a half years prior to the study. [4]

The "experimental" anchorman read the original lead-in for each of the eight stories, and then he read a news story based upon each of the original film reports. An effort was made to retain the original wording used by the newsman at the scene of each news event, although, for the sake of clarity and "good news writing," the order of words, sentences, and paragraphs was altered in some instances. No information not included in the original film report was added, however, and none was omitted.

Two experimental tapes were prepared. Tape A was composed of four stories using the on-camera lead-in and film taken at the scene and four stories simply read by the anchorman; the order of presentation was randomly determined. Tape B was prepared in the same way, except that those stories which did not include film in tape A included film in tape B, and those which included film in tape A did not include film in tape B.

Pilot test results indicated no serious problems with the research design or procedures, so the study was executed on two successive days in January 1974.

Two groups of subjects viewed tape A and two groups viewed tape B (for a total of four groups) each of the two days. For each tape, one group viewed the television report and then read the newspaper account before making judgments about believability and preference. The other group read the newspaper article first and then viewed the television report before making the necessary judgments.

Subjects were randomly assigned to one of the four groups each day, and groups were randomly assigned to treatments. The tape A and tape B groups were to have been of equal size, but one subject somehow got into the incorrect group, so the N for tape A is 53 and the N for tape B is 55.

In the experimental condition, 39 students in one beginning journalism class and 69 students in one beginning radio-television-film (RTF) class at Temple University participated. [5]

Of the 108 students, 24 were 18 years old, 19 were 19, 23 were 20, 10 were 21, and 32 were more than 21 years old; 38 were RTF majors, 28 were journalism majors, and 39 were majors in other fields; 46 were freshmen, 35 were sophomores, 18 were juniors, and 7 were seniors; 26 RTF majors and 21 journalism majors had no prior communications courses, 19 RTF or journalism majors had prior communications courses, 35 students in other fields had no previous communications courses, and 7 did have such courses. [6]

It was recognized early that previous courses in communications or academic major could potentially bias results of the experiment. Respondents, therefore, were divided into four separate groups: RTF majors without previous communications courses, journalism majors without previous communications courses, majors in fields other than RTF and journalism without previous courses, and all students, regardless of major, who had previous communications courses. Data for each group were analyzed separately, and, as will be seen in the discussion of results, no bias was detected.

The following hypotheses were tested <u>for each news story</u>:

HO_1: The proportion of respondents which believes the television report with film more than the newspaper report will be significantly larger than the proportion which believes the television report without film more than the newspaper report.

HO_2: The proportion which prefers the television report with film more than the newspaper report will be significantly larger than

the proportion which prefers the television report without film more than the newspaper report.

HO_3: The proportion which believes the television report with film more than the newspaper account will be significantly larger than .500 (the proportion one would expect if television and newspaper reports were equally believed).

HO_4: The proportion which believes the television report without film more than the newspaper account will be significantly smaller than .500.

HO_5: The proportion which prefers the television report with film more than the newspaper account will be significantly larger than .500.

HO_6: The proportion which prefers the television report without film more than the newspaper account will be significantly smaller than .500.

Results

It was necessary to determine before data analysis whether responses were biased by academic major or by communications courses taken prior to the experiment. The possibility existed, for example, that RTF majors would respond differently from journalism majors, and that persons who had prior communications courses would respond differently from those who had not had such courses.

To test the null hypothesis that academic major or past communications courses did not bias responses, subjects were divided into four groups according to academic major and number of prior communications courses taken.

Results are reported in Table 1. Chi square tests were calculated for the four groups on each of two dimensions for each tape (i.e., the preference dimension for tapes A and B, and the believability dimension for tapes A and B). As none of the four chi square tests approached significance, it was concluded that academic major and prior communications courses were not sources of bias.[7] Groups, therefore, were collapsed for hypothesis testing.

Data relating to hypotheses 1 and 2 are reported in Tables 2 and 3. In those tables, as in Tables 4 and 5, each proportion is the proportion of respondents who selected a television report as the most believable (or preferred) for each news event.

When data were coded for analysis, a 1 represented believability of (or preference for) a television report, and a 0 represented believability of (or preference for) a newspaper account of a given event. The higher a given proportion, therefore, the greater belief in (or preference for) a television report of an event, and the lower the proportion, the greater the belief in (or preference for) a newspaper report.

If all respondents marked television as the most believed medium for an item, for instance, the resulting proportion would be 1.000; if all believed newspapers for an item, the resulting proportion would be .000. Proportions, therefore, indicate the relative believability of (or preference for) television and newspaper reports for specific items.

As Table 2 data show, results support hypothesis 1—that the proportion which believes the television report with film more than the newspaper report will be significantly larger than the proportion which believes the television report without film more than the newspaper report—for five of eight items.[8]

The proportions which believe the television reports with film more than the newspaper accounts, furthermore, are larger for all eight items than the proportions which believe television reports without film more than the newspaper accounts. Differences are significant, however, only for items 1, 2, 5, 7, and 8.

Hypothesis 2—that the proportion which prefers the television report with film more than the newspaper report will be significantly larger than the proportion which prefers the television report without film more than

the newspaper report—is supported for seven of the eight news stories, as shown in Table 3.

The proportion which selected television as the most preferred medium for item 5, however, was slightly larger when film was excluded than when film was included in the television report, contrary to the hypothesis.

Data relating to hypotheses 3, 4, 5, and 6 are reported in Tables 4 and 5. Each z in the table reflects the significance of the difference between the obtained proportion and the proportion one would expect if the television and newspaper reports were equally believed (or preferred) for a given item (i.e., .500). [9]

Table 4 data support hypothesis 3—that the proportion which believes the television report with film more than the newspaper account will be significantly larger than .500—for half of the eight items.

For items 1 and 6, the newspaper reports are more believed (but not significantly) than the television reports with film, contrary to the hypothesis, and the television reports with film are significantly more believed only for items 3, 5, 7, and 8. For the remaining items—numbers 2 and 4—the television reports are more believed, as hypothesized, but the differences are not significant.

Hypothesis 4—that the proportion which believes the television report without film more than the newspaper account will be significantly smaller than .500—is supported for items 1, 2, 5, 7, and 8, as shown in Table 4. For items 4 and 6, newspapers are more believed, but the differences are not significant. Television is more believed for item 3, contrary to the expectation, but the difference is not significant.

Hypothesis 5 is the only one of the six in which all items are

supported by the data, as shown in Table 5. It was hypothesized that the proportion which prefers the television report with film more than the newspaper account will be significantly larger than .500.

Finally, hypothesis 6—that the proportion which prefers the television report without film more than the newspaper account will be significantly smaller than .500—is supported for three stories.

As shown in Table 5, newspaper reports are significantly more preferred than television reports only for items 1, 7, and 8; for items 2, 3, and 4, newspaper reports are more preferred, but the differences are not significant. For item 6, the television report is more preferred than the newspaper report, and for item 5, the television report is significantly more preferred.

Summary and Conclusions

It was expected in this study that: 1) all television news reports with film would be significantly more believed and preferred than newspaper reports of the same events, 2) all newspaper reports would be significantly more believed and preferred than television reports without film, and 3) all television reports with film would be significantly more believed and preferred (in a direct comparison with newspaper reports) than reports without film.

Results support the expectation that television reports with film would be more preferred than newspaper reports, as shown in Table 5. Television reports with film are significantly more preferred than newspaper reports for all eight news items.

The expectation that newspaper reports would be significantly more preferred than television reports without film, however, receives limited

support. As shown in Table 5, newspaper reports are significantly more preferred than television reports without film for only three items; for one item, the television report without film is significantly more preferred than the newspaper report.

Table 3 data strongly support the expectation that television reports with film would be more preferred (in the direct comparison with newspapers) than television reports without film. For seven of eight news items listed in the table, television reports with film are significantly more preferred than television reports without film.

It appears that television reports with film are preferred to newspaper reports, and that even when television reports consist only of "talking heads," the preference for newspaper reports is not substantial.

Results are less clear for perceived media credibility. Table 2 data, for example, show that the addition of news film improves the relative credibility of television reports (when compared with newspaper reports of the same events) for all eight news items, but the differences are not significant for three items.

Data in Table 4, furthermore, show that television reports with film are more believed than newspaper reports of the same events for six items, but the differences are significant for only four items, contrary to the expectation that television would be more believed for all items when the reports included news film.

Finally, it was expected that newspaper reports would be significantly more believed than television reports without film for all eight items; results show that newspaper reports are more believed for seven of the items, but that the differences are significant for only five items.

It appears, therefore, that for the media credibility dimension particularly—and to some extent for the media preference dimension—results lend support to McDaniel's statement that "apparently, the effect of the use of film is determined by the nature and content of each story," [10] and Ryan's finding that perceived credibility may be related to story content and geographic origin of the report.

Footnotes

[1] Richard F. Carter and Bradley S. Greenberg, "Newspapers or Television: Which Do You Believe?" Journalism Quarterly, 42:29-34 (Winter 1965); Lawrence K.H. Chang and James B. Lemert, "The Invisible Newsman and Other Factors in Media Competition," Journalism Quarterly, 45:436-44 (Autumn 1968); and Michael Ryan, "News Content, Geographical Origin and Perceived Media Credibility," Journalism Quarterly, 50:312-18 (Summer 1973).

[2] Drew O. McDaniel, "Film's Presumed Advantages in Presenting Television News," Journalism Quarterly, 50:146-49 (Spring 1973), p. 147.

[3] The author thanks the following persons in the Office of Television Services at Temple University for videotaping the evening newscasts and for their assistance in the preparation of videotapes used in this experiment: William H. Seibel, director; T.J. Bloser, production supervisor; and Warren A. Schloss, producer-director.

[4] Special thanks go to John B. Roberts, professor of communications at Temple, for serving as anchorman for this study.

[5] The author thanks Thomas F. Gordon, assistant professor of communications at Temple, for allowing the use of his radio-television-film class and Howard Shapiro, lecturer in journalism at Temple, for allowing the use of his journalism class for the experiment.

[6] Figures do not always total 108 because some subjects failed to supply the requested information.

[7] A discussion of procedures for calculating a chi square test appears in W. James Popham, Educational Statistics: Use and Interpretation (New York: Evanston and London: Harper & Row, Publishers, 1967), pp. 291-96.

[8] Procedures for computing the significance of the difference between two proportions are described in Hubert M. Blalock, Jr., Social Statistics (New York: McGraw-Hill Book Company, 1972), pp. 228-30. As direction was predicted, one-tailed tests were used.

[9] The method for computing the significance of a difference between an obtained proportion and an expected proportion is described in Blalock, pp. 193-97. Again, one-tailed tests were used.

[10] McDaniel, op. cit., p. 149.

TABLE 1

Chi Square Tests for Differences Among Groups

		Groups, X^2 Results					
		1	2	3	4	X^2	p
Believability							
Tape A	(f_e)	32.8	54.7	60.6	43.7	3.97	n.s.
	(f_o)	26.0	66.0	57.0	43.0		
Tape B	(f_e)	48.2	43.8	72.6	55.4	1.04	n.s.
	(f_o)	46.0	40.0	79.0	55.0		
Preference							
Tape A	(f_e)	44.9	74.3	84.9	59.9	1.08	n.s.
	(f_o)	41.0	81.0	85.0	57.0		
Tape B	(f_e)	51.8	47.0	77.8	60.5	1.85	n.s.
	(f_o)	45.0	44.0	85.0	63.0		

df = 3; N = 53 for tape A, N = 55 for tape B.

Note: Group 1, journalism majors who had no previous courses in communications; group 2, RTF majors who had no previous courses in communications; group 3, majors in other fields who had no previous courses in communications; and group 4, subjects who had previous courses in communications, regardless of major.

Note: Expected frequences, f_e, were obtained by summing for each of the four groups the number of ones appearing in each of the four data matrices (i.e., believability, tapes A and B, and preference, tapes A and B) and dividing by the total number of possible ones in each data matrix. The resulting proportions were .456 for believability, tape A; .503 for believability, tape B; .624 for preference, tape A; and .540 for preference, tape B. Expected proportions were converted to expected frequencies by multiplying the number of possible ones for each of the four groups for each data matrix by the expected proportions.

TABLE 2

Proportion Selecting Television as More Believable than Newspapers for Each Item

Item Number and Description	Media Believability: Film included	Film excluded	z
1. Philadelphia Police Commissioner charged with contempt of court for failure to release police promotion records	.396†	.236	1.79 *
2. Philadelphia bank manager kidnapped, family held hostage overnight	.582	.321†	2.72 **
3. New Jersey authorities stage year's biggest drug raid	.679†	.637	1.44
4. New Jersey state trooper, Black Liberation Army member killed in shootout on New Jersey turnpike	.593	.451†	1.48
5. More than 1500 full-time drivers strike, close Philadelphia's Yellow Cab Company	.630	-.327†	3.50 ***
6. Upcoming primary election (spring 1973) in Philadelphia	.453†	.436	.18
7. Sale by State of Pennsylvania of 67-foot yacht "Commonwealth"	.736†	.327	4.26 ***
8. Vandalism at elementary school in northeast Philadelphia	.691	.302†	4.04 ***

† for proportions with (†) beside them, N = 53; for other proportions, N = 55;
* $p < .05$; ** $p < .01$; *** $p < .001$.

TABLE 3

Proportion Selecting Television as More Preferred than Newspapers for Each Item

Item Number and Description	Media Preference: Film included	Film excluded	z
1. Police Commissioner	.673 †	.273	4.16 ***
2. Bank manager kidnapped	.655	.434 †	2.31 *
3. New Jersey drug raid	.717 †	.473	2.58 **
4. New Jersey shootout	.667	.442 †	2.35 **
5. Yellow Cab strike	.655	.660 †	- .05
6. Primary election	.774 †	.545	2.51 **
7. "Commonwealth" sale	.943 †	.236	7.45 ***
8. School vandalism	.818	.358 †	4.86 ***

† for proportions with (†) beside them, N = 53; for other proportions, N = 55;
* $p < .05$; ** $p < .01$; *** $p < .001$.

TABLE 4

Relative Believability of Television and Newspapers
in Stories With and Stories Without Television News Film

Item Number and Description	Media Believability: Film included	z	Film excluded	z
1. Police Commissioner	.396†	-1.51	.236	-3.92 ***
2. Bank manager kidnapped	.582	1.22	.321†	-2.61 **
3. New Jersey drug raid	.673†	2.52 **	.537	.55
4. New Jersey shootout	.593	1.38	.451†	- .71
5. Yellow Cab strike	.630	1.93 *	.327†	-2.52 **
6. Primary election	.453†	- .68	.436	- .95
7. "Commonwealth" sale	.736†	3.44 ***	.327	-2.57 **
8. School vandalism	.691	2.83 **	.302†	-2.88 **

† for proportions with (†) beside them, N = 53; for other proportions, N = 55;
* $p < .05$; ** $p < .01$; *** $p < .001$.

TABLE 5

Relative Preference of Television and Newspapers
in Stories With and Stories Without Television News Film

Item Number and Description	Media Preference: Film included	z	Film excluded	z
1. Police Commissioner	.673 †	2.52 **	.273	-3.37 ***
2. Bank manager kidnapped	.655	2.30 *	.434 †	- .98
3. New Jersey drug raid	.717 †	3.16 ***	.473	- .40
4. New Jersey shootout	.667	2.48 **	.442 †	- .84
5. Yellow Cab strike	.655	2.30 *	.660 †	2.33 **
6. Primary election	.774 †	3.99 ***	.545	.67
7. "Commonwealth" sale	.943 †	6.45 ***	.236	-3.92 ***
8. School vandalism	.818	4.72 ***	.358 †	-2.07 *

† for proportions with (†) beside them, N = 53; for other proportions, N = 55;
* $p < .05$; ** $p < .01$; *** $p < .001$.